

What is claimed is:

1. A dry powder inhaler, comprising:

a housing having a mouthpiece and a delivery passageway connected to the mouthpiece;

a magazine positioned within the housing and including a plurality of reservoirs for holding doses of dry powder, and wherein the magazine is movable within the housing so that the reservoirs are sequentially positioned within the delivery passageway of the housing upon movement of the magazine;

a cover connected to the housing and selectively movable to open and close access to the mouthpiece of the housing; and

a rake connected to the cover, extending into the housing and engageable with the magazine so that, upon the cover being moved to open the mouthpiece, the rake moves the magazine and causes one of the reservoirs of the magazine to be positioned within the delivery passageway.

2. An inhaler according to claim 1, wherein each of the reservoirs of the magazine is covered in a substantially moisture-resistant and airtight manner prior to the reservoir being positioned within the delivery passageway of the housing.

3. An inhaler according to claim 1, wherein each of the reservoirs of the magazine is covered in a substantially moisture-resistant and airtight manner with a layer of foil prior to the reservoir being positioned within the delivery passageway of the housing.

4. An inhaler according to claim 1, wherein the magazine is made of polypropylene and each of the reservoirs of the magazine is covered in a substantially moisture-resistant and airtight manner with a layer of foil prior to the reservoir being positioned within the delivery passageway of the housing.

5. An inhaler according to claim 4, wherein the housing includes a sharp edge positioned to remove the foil from each of the reservoirs of the magazine as the magazine moves immediately prior to the reservoir being positioned within the delivery passageway of the housing.

6. An inhaler according to claim 1, wherein the magazine is annular and rotatably movable such that rotation of the annular magazine sequentially positions the plurality of the dry powder reservoirs within the delivery passageway of the housing.

7. An inhaler according to claim 6, wherein the magazine is rotatably movable with respect to the housing in only a single direction.

8. An inhaler according to claim 6, wherein the annular magazine includes teeth extending radially outwardly that are engaged by the rake of the mouthpiece cover for advancing the magazine upon the cover being opened

9. An inhaler according to claim 8, wherein the rake is pivotally connected to the cover and the cover is pivotally connected to the housing.

10. An inhaler according to claim 1, further including means for indicating the number of reservoirs containing dry powder.

11. An inhaler according to claim 1, further comprising dry powder medicament contained in the reservoirs of the magazine.

12. An inhaler according to claim 1, wherein the reservoirs of the dose magazine comprise bores that extend from a lower surface and an upper surface of the magazine and the magazine includes a lower layer of moisture resistant, air-tight material covering the lower surface and an upper layer of moisture resistant, air-tight material covering the upper surface and enclosing medicament in the bores of the magazine in a dry, air-tight manner.

13. An inhaler according to claim 12, wherein the upper layer of moisture resistant, air-tight material is provided with domes over the medicament bores.

14. An inhaler according to claim 13, wherein the magazine is formed of plastic and the moisture resistant, air-tight material comprises metal foil secured to the magazine with adhesive.

15. An inhaler according to claim 1, wherein each reservoir of the dose magazine includes a lining of moisture resistant, air-tight material.

16. An inhaler according to claim 1, wherein the reservoirs of the dose magazine are formed in a trough of moisture resistant, air-tight material fitted into the magazine.

17. An inhaler according to claim 1, wherein the magazine includes a layer of moisture resistant, air-tight material secured to an upper surface of the magazine over the reservoirs, and the inhaler further includes a foil removal mechanism having a rotatable winding wheel that peels the layer of moisture resistant, air-tight material from the upper surface of the magazine as the magazine is moved.

18. An inhaler according to claim 1, wherein the dose magazine includes bores sealed with at least one layer of moisture resistant, air-tight material, and deployable pistons contained in the bores, and each of the pistons has at least one compartment holding powder medicament which is presented for inhalation upon the piston being pushed through the layer of moisture resistant, air-tight material.

19. An inhaler according to claim 18, further comprising an actuator for successively deploying the pistons from the dose magazine as the dose magazine is moved over the actuator.

20. An inhaler according to claim 18, further comprising an actuator connected to the cover for successively deploying the pistons from the dose magazine when the cover is opened.

21. An inhaler according to claim 18, wherein the medicament pistons each include multiple compartments.

22. An inhaler according to claim 21, wherein, for each of the medicament pistons, the multiple compartments vary in size.

23. An inhaler according to claim 21, further comprising an actuator for deploying the pistons from the dose magazine as the dose magazine is moved over the actuator, and an adjustment mechanism for adjusting the magnitude of deployment produced by the actuator.

24. An inhaler according to claim 1, wherein the dose magazine includes bores containing deployable medicament pistons, and the bores are one of, circular bores that extend radially through the magazine, circular bores that extend axially through the magazine, rectangular bores that extend radially through the magazine, and rectangular bores that extend axially through the magazine.

25. An inhaler according to claim 1, wherein the dose magazine includes sets of multiple bores containing deployable medicament pistons, and the inhaler includes a set of deployable actuators for causing deployment of the set of the pistons from the magazine.

26. A dose magazine for a dry powder inhaler, comprising:

a plurality of reservoirs extending between a lower surface and an upper surface of the magazine, wherein the magazine is movable within a housing of a dry powder inhaler so that the reservoirs are sequentially positioned within a delivery passageway of the housing of the dry powder inhaler upon movement of the magazine,

a lower layer of moisture resistant, air-tight material covering the lower surface of the magazine,

an upper layer of moisture resistant, air-tight material covering the upper surface of the magazine, such that the layers of moisture resistant, air-tight material enclose the reservoirs of the magazine in a substantially dry, air-tight manner, and

deployable medicament pistons positioned in the reservoirs and including at least one chamber for holding dry powder medicament, so that deployment of the piston through one of the layers of moisture resistant, air-tight material presents the dry powder medicament to the delivery passageway of the dry powder inhaler for inhalation.

27. A dose magazine according to claim 26, wherein the magazine is made of polypropelyne and each of the layers of moisture resistant, air-tight material comprises a metal foil.

28. A dose magazine according to claim 26, wherein the magazine is annular and rotatably movable such that rotation of the annular magazine will sequentially position the reservoirs within the delivery passageway of the dry powder inhaler.

29. A dose magazine according to claim 26, further comprising dry powder medicament contained in the chambers of the pistons of the magazine.

30. A dose magazine according to claim 26, wherein the dose magazine includes sets of multiple bores containing deployable medicament pistons, and the inhaler includes a set of deployable actuators for causing deployment of the set of the pistons from the magazine.

31. A dose magazine according to claim 26, wherein the medicament pistons each include multiple compartments.

32. A dose magazine according to claim 31, wherein, for each of the medicament pistons, the multiple compartments vary in size.

33. A dry powder inhaler including a dose magazine according to claim 26 and further including a housing containing the dose magazine and having a mouthpiece and a delivery passageway connected to the mouthpiece, wherein the magazine is positioned and movable within the housing such that the reservoirs are sequentially positioned within the delivery passageway of the housing of the dry powder inhaler upon movement of the magazine.

34. An inhaler according to claim 33, wherein the magazine is rotatably movable with respect to the housing in only a single direction.

35. An inhaler according to claim 33, further comprising an actuator for successively deploying the pistons from the dose magazine as the dose magazine is moved over the actuator.

36. An inhaler according to claim 35, further comprising an adjustment mechanism for adjusting the magnitude of deployment produced by the actuator.